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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,976	02/15/2002	Xiangxin Bi	2950.18US02	1411
7590	08/04/2005			EXAMINER LE, HOA T
Patterson, Thuente, Skaar & Christensen, P.A. 4800 IDS Center 80 South 8th Street Minneapolis, MN 55402-2100			ART UNIT 1773	PAPER NUMBER

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action
Before the Filing of an Appeal Brief**

Application No.	10/076,976	Applicant(s) BI ET AL.
Examiner H. T. Le	Art Unit 1773	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 01 July 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) The period for reply expires _____ months from the mailing date of the final rejection.
- b) The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. The Notice of Appeal was filed on 11 April 2005. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because

- (a) They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) They raise the issue of new matter (see NOTE below);
- (c) They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. Applicant's reply has overcome the following rejection(s): _____.

6. Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. For purposes of appeal, the proposed amendment(s): a) will not be entered, or b) will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: None.

Claim(s) objected to: None.

Claim(s) rejected: 18-30.

Claim(s) withdrawn from consideration: None.

AFFIDAVIT OR OTHER EVIDENCE

8. The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9. The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10. The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. The request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attached "Detailed Advisory Action".

12. Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s).

13. Other: _____.


H. T. Le
Primary Examiner
Art Unit: 1773

DETAILED ADVISORY ACTION

I. The 35 USC 112 Rejection:

1. Applicants argued that it is inappropriate to put “forces of nature” in to a claim over which they have no control and the claim would be much more confusing if the language were added. Weak agglomeration by itself is unclear because the term “weak” is relative. So the force(s) that hold the nanoparticles in a weakly agglomerated form must be identified for the description of the weak agglomerates to be enabling. Consequently, these forces should be included in the claims for the claims to be commensurate with the enabling disclosure.

In addition, the term “weakly agglomerated” could also raise the issue of indefiniteness because the metes and bounds that constitutes a “weak” agglomerate cannot be ascertained.

2. The example that Applicants used in their argument (claim 1 of US Patent 6,543,543) is not analogous to the issue at hand. The claim 1 of the ‘543 patent does not pertain to the speed of the fluid movement; therefore, thus how the fluid moves is not an issue. On the other hand, in the instant case, the issue is the degree of the agglomeration, thus it’s critical how the nanoparticles are agglomerated. Thus, the forces that cause the nanoparticles to be held weakly should be identified or defined. Had the patentees of the ‘543 patent tried to distinguish their invention over the prior art reference by claiming that, in their pumping system, the fluid moves by a natural force while the fluid movement in the pumping system of the prior art references is quickened or slowed-down by application of some added artificial force, then Applicants may have an analogous case to support their argument.

3. Contrary to Applicants' argument, identifying forces that hold the nanoparticles in weakly agglomerated form does not create confusion to the claims. As stated above, if the invention relies on the nanoparticles being weakly agglomerated by forces of nature as applicants have been arguing and because the instant specification only recognizes natural forces for the weakly agglomerating phenomenon of the nanoparticles, then the forces are critical for the claims to be commensurate to the enabling scope of the disclosure. In addition, without identifying the forces, it would be unclear what degree constitutes a "weak agglomerate" and how such weak agglomerates are different from the nanoparticles of the prior art references.

II. The Art-Based Rejection:

4. Applicants lamented that the Examiner's analysis "has gotten off track" with regard to the 35 USC 102 rejection because "no one is asking" for the Wiederhoft patent to be invalidated. However, Applicants repeatedly contend that "the Wiederhoft patent does not disclose rutile titanium oxide particles with an average particle size less than 150 nm" (see Applicants' responses on: October 2002, page 5, second paragraph; March 2004, page 7, last paragraph; October 2004, paragraph bridging pages 8 and 9; and April 2005, page 10, second paragraph). If the examiner were to agree with Applicants' assertion when the Wiederhoft patent clearly states that it provides a particulate nanodisperse titanium dioxide having a particle size of 1 to 100 nm and by "nanodisperse titanium dioxide" it includes "rutiles" (col. 1, lines 7-13 and col. 2, lines 52-59), it would have the effect of invalidating the patent. What

else would it mean if a patent is declared to not provide the product which its patentees claim to have possession of?

5. Applicants requested that "we need to understand what they have accomplished" insisting that the titanium dioxide particles taught in the Wiederhoft patent are a result of sol-gel reactions and thus are not rutile titanium dioxide particles according to the claimed invention. The claimed invention relates to rutile titanium oxide particles with an average particle size less than 150 nm and no particles have a diameter greater than about four times the average diameter. The Wiederhoft patent states at column 2, lines 52-55 that "the present invention provides a particulate nanodisperse titanium dioxide having a maximum value of the particles size distribution of between 1 and 10 nm" and at col. 1, lines 7-10, it states, "For the purpose of the present invention, nanodisperse titanium dioxide is taken to be rutiles, anatases and amorphous titanium dioxide having a particle size of 1 to 100nm..." (emphases added). It's puzzling why Applicants still insist that Wiederhoft does not teach Applicant's claimed invention.

6. Applicants stated that "[a]pplicant's specification is NOT directed to sol-gel materials of other solution-based synthesis" implying that the product taught in the Wiederhoft patent is a sol-gel material. First of all, how the materials are formed is not an issue here because the claims are product claims, not process claims or even product-by-process claims. Secondly, if the Wiederhoft patent clearly states that its teaching is a production of particulate monodisperse titanium oxide particles comprising rutile titanium dioxide particles of particle size from 1 to 100 nm, then the examiner cannot possibly dismiss these

statements of the Wiederhoft patent as untrue in order to accept Applicant's arguments that the process disclosed in the Wiederhoft patent is a sol-gel process and thus cannot accomplish the product it claimed to have accomplished. Doing so would be equivalent to invalidating the Wiederhoft patent.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. T. Le whose telephone number is 571-272-1511. The examiner can normally be reached on 10:00 a.m. to 6:30 p.m., Mondays to Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



H. T. Le
Primary Examiner
Art Unit 1773